Bruhat Bangalore Mahanagara Palike

Executive Engineer

Bytarayanapura Division

QUALITY REPORT

(4th & Part Bill)

Name of Work : PACKAGE NO-6 (CONSIST OF 14 WORKS)

Est. Cost: 1500.00 LAKHS
Job Code: 009-23-000003

MECADEZ
Insight Makes It Happen

Mecadez Core Technologies Private limited

Project Management Consultancy Services

Registered Office: No.80, Aniketana, 14th 'B' Main, West of Chord Road, 2nd Stage, 2nd Phase, Mahalakshmipuram, Bengaluru-560086
Ph: - +91-9538136111 +91-9483561234
E-mail: mecadez@gmail.com

Mecadez Core Technologies Private Limited

Project Management Consultancy Services

Summary of Frequencies of Field Tests and Lab Tests Conducted

Name of the work: **Package No.06 Consists of 14 Works**

Job No: **MCTPL/BBMP/EE/BTP/PMC/P-3877/2022-23/QR**

Contractor **M/s SMLP Asphalts**

Sl. No	Particulars of the Tests	Plain Cement Concrete (1:3:6)			
		Quantity Cum	Frequency of Tests	Tests Required	Tests Carried Out
I	**Cement**	28.5	OPC 43 Grade		
1	Consistency test		1Test / Source of Supply	1	1
2	Fineness test		1Test / Source of Supply	1	1
3	Soundness test		1Test / Source of Supply	1	1
4	Compressive strength test				
i	7-days		1Test / Source of Supply	1	1
ii	28-days		1Test / Source of Supply	1	1
II	**Fine Aggregates**				
5	Gradation test		1Test / Day	1	1
III	**Coarse aggregates**				
6	Gradation test		1Test / Day	1	1
7	Water absorption test		Regular Intervals	1	1
8	Impact test		1Test / Source of Supply	1	1

Note: Frequency of tests as per Specifications MORT&H, V Revision, Section 900.

Consultant Contractor ASSISTANT ENGINEER ASSISTANT EXE ENGINEER

Mecadez Core Technologies Private Limited

Assistant Executive Engineer
Vidyaranyapura Sub Division
M.P, Bangalore - 97

Test Report
Consistency test

Project Name	Package No.06 Consists of 14 Works
Client	Excecutive Engineer - Byatarayanapura Division
Job No	MCTPL/BBMP/EE/BTP/PMC/P-3877/2022-23/QR
Mix Type	Plain Cement Concrete (1:3:6)
Contractor	M/s SMLP Asphalts
Test Method	IS : 4031 (Part 5) -1988 & Specification for Road & Bridge Works, MORT&H, Rev-V.
Location	Source of Material
Material	Cement
Sample No	1
Sample Collection Date	26/Nov/2022
Testing Date	27-Nov-2022

Sl. No.	Description	Trial 1	Trial 2	Trial 3	Trial 4	Trial 5
1	Weight of Cement	400	400	400	400	400
2	Percentage of water added (%)	27	28.5	29.5	30	31
3	Weight of Water (gm)	108	114	118	120	124
4	Initial Reading of Plunger (mm)	40	40	40	40	40
5	Difference (mm)	22	18	16	14	5.5

Results: Standard Consistency of Cement: 31.00%

Note:

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iv. Any query regarding the report must be reported immediately.

For Mecadez Core Technologies Private Limited

Mecadez Core Technologies Private Limited

Authorised Signature

Assistant Executive Engineer
Vidyaranyapura Sub Division
B.B.M.P, Bangalore - 97

Test Report
Fineness test

Project Name	Package No.06 Consists of 14 Works
Client	Excecutive Engineer - Byatarayanapura Division
Job No	MCTPL/BBMP/EE/BTP/PMC/P-3877/2022-23/QR
Mix Type	Plain Cement Concrete (1:3:6)
Contractor	M/s SMLP Asphalts
Test Method	IS : 4031 (Part 5) -1988 & Specification for Road & Bridge Works, MORT&H, Rev-V.
Location	Source of Material
Material	Cement
Sample No	1
Sample Collection Date	26/Nov/2022
Testing Date	27-Nov-2022

Sl. No.	Determination	Trial 1	Trial 2
1	Weight of Cement before sieve (gm)	100	100
2	Weight of residue retained on 90um sieve (gm)	5.8	6.4
3	Percentage retained (%)	5.8	6.4
4	Average Percentage retained (%)	6.10	

Results: Residue of cement is: 6.10%
Comments: Maximum allowable residue by mass for ordinary portlad cement is 10%
Note:

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Assistant Executive Engineer
Vidyaranyapura Sub Division
B.B.M.P, Bangalore - 97

Test Report
Soundness test

Project Name	Package No.06 Consists of 14 Works
Client	Excecutive Engineer - Byatarayanapura Division
Job No	MCTPL/BBMP/EE/BTP/PMC/P-3877/2022-23/QR
Mix Type	Plain Cement Concrete (1:3:6)
Contractor	M/s SMLP Asphalts
Test Method	IS : 4031 (Part 3) -1988 & Specification for Road & Bridge Works, MORT&H, Rev-V.
Location	Source of Material
Material	Cement
Sample No	1
Sample Collection Date	26/Nov/2022
Testing Date	27-Nov-2022

Sl. No.	Description	Trial 1	Trial 2	Trial 3
1	Initial Distance between the indicator points of Lechatelier mould	11	10	11
2	Final Distance between the indicator points of Lechatelier mould	19	18	16
3	Difference or expansion	8	8	5
4	Average Differences or Expansion in mm	7.00		

Results: Difference in Expansion of Cement: 7.00 mm
Comments: Maximum allowable Expansion of cement is 10 mm.

Note:

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Vidyaranyapura Sub Division
B.B.M.P, Bangalore - 97

AB-09

Test Report
Compressive strength test

Project Name	Package No.06 Consists of 14 Works
Client	Excecutive Engineer - Byatarayanapura Division
Job No	MCTPL/BBMP/EE/BTP/PMC/P-3877/2022-23/QR
Mix Type	Plain Cement Concrete (1:3:6)
Contractor	M/s SMLP Asphalts
Test Method	IS : 4031 (part 6)-1988 & Specification for Road & Bridge Works, MORT&H, Rev. V.
Location	Source of Material
Material	Cement
Sample No	1
Sample Collection Date	26/Nov/2022
Testing Date	8-Dec-2022

Cube	Cement Grade	Age at Test (Days)	Slump (mm)	Weight (kg)	Dimension (LxWxH)	Density (kg/m3)	Max. Load (KN)	Area (mm2)	Compressive Strength (N/mm2)	Average Sample (N/mm2)
1	43	7	-	0.852	70.6x70.6x70.6	2302	169	4984.36	33.91	34.91
2	43	7	-	0.894	70.6x70.6x70.6	2415	179	4984.36	35.91	

Results: 7-days Compressive strength of cement is 34.19 N/mm^2

Comments: 7-days Compressive strength of cement should not be less than 33 N/mm^2

Note:

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Assistant Executive Engineer
Vidyaranyapura Sub Division
B.B.M.P, Bangalore - 97

Test Report
Compressive strength test

Project Name	Package No.06 Consists of 14 Works
Client	Excecutive Engineer - Byatarayanapura Division
Job No	MCTPL/BBMP/EE/BTP/PMC/P-3877/2022-23/QR
Mix Type	Plain Cement Concrete (1:3:6)
Contractor	M/s SMLP Asphalts
Test Method	IS : 4031 (part 6)-1988 & Specification for Road & Bridge Works, MORT&H, Rev. V.
Location	Source of Material
Material	Cement
Sample No	1
Sample Collection Date	26/Nov/2022
Testing Date	29-Dec-2022

Cube	Cement Grade	Age at Test (Days)	Slump (mm)	Weight (kg)	Dimension (LxWxH)	Density (kg/m3)	Max. Load (KN)	Area (mm2)	Compressive Strength (N/mm2)	Average Sample (N/mm2)
1	43	28	-	0.894	70.6x70.6x70.6	2287.00	216	4984.36	43.34	44.84
2	43	28	-	0.863	70.6x70.6x70.6	2316.00	231	4984.36	46.34	

Results: 28-days Compressive strength of cement is 44.84N/mm^2

Comments: 28-days Compressive strength of cement should not be less than 43 N/mm^2

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Assistant Executive Engineer
Vidyaranyapura Sub Division
B.B.M.P, Bangalore - 97

29-12-09

Test Report
Gradation test

Project Name	Package No.06 Consists of 14 Works
Client	Excecutive Engineer - Byatarayanapura Division
Job No	MCTPL/BBMP/EE/BTP/PMC/P-3877/2022-23/QR
Mix Type	Plain Cement Concrete (1:3:6)
Contractor	M/s SMLP Asphalts
Test Method	IS : 2386 (Part - 1) 1963 & Specification for Road & Bridge Works, MORT&H, Rev. V.
Location	Source of Material
Material	Fine Aggregates
Sample No	1
Sample Collection Date	26/Nov/2022
Testing Date	28-Nov-2022

Weight of Sample(gram): 200

Sl No.	IS Sieve Size	Weight retained	% retained	% Cumulative	Cumulative % of Passing		Remarks
					% Passing	Gradation limits	
1	10 mm	0	0.00	0.00	100.00	100	Gradation satisfies the MORT&H Zone ll Specification for PCC
2	4.75 mm	16.48	8.24	8.24	91.76	90-100	
3	2.36 mm	15.82	7.91	16.15	83.85	75-100	
4	1.18 mm	32	16.00	32.15	67.85	55-90	
5	600 µ	54	27.00	59.15	40.85	35-59	
6	300 µ	65	32.50	91.65	8.35	8-30	
7	150 µ	10	5.00	96.65	3.35	0-10	

Note:

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Authorised Signature

Assistant Executive Engineer
Vidyaranyapura Sub Division
B.B.M.P, Bangalore - 97

AR-09

Test Report
Gradation test

Project Name	Package No.06 Consists of 14 Works
Client	Excecutive Engineer - Byatarayanapura Division
Job No	MCTPL/BBMP/EE/BTP/PMC/P-3877/2022-23/QR
Mix Type	Plain Cement Concrete (1:3:6)
Contractor	M/s SMLP Asphalts
Test Method	IS : 2386 (Part - 1) 1963 & Specification for Road & Bridge Works, MORT&H, Rev.
Location	Source of Material
Material	Coarse aggregates
Sample No	1
Sample Collection Date	26/Nov/2022
Testing Date	28-Nov-2022

Weight of Sample: 4000 gms

Sl. No	I.S. Sieve size	Weight Retained (gm)	Percentage of weight Retained (%)	Cumulative Percentage of weight retained (%)	Cumulative % of Passing		Remarks
					Test Result	Gradation Limits as per MORT&H	
1	31.50	0	0.00	0.00	100.00	100	
2	26.50	368	9.20	9.20	90.80	85-95	
3	19.00	453	11.33	20.53	79.48	68-88	
4	9.50	892	22.30	42.83	57.18	45-65	
5	4.75	623	15.58	58.40	41.60	30-55	
6	0.60	856	21.40	79.80	20.20	8-30	
7	0.15	436	10.90	90.70	9.30	5-15	
8	0.08	324	8.10	98.80	1.20	0-5	

Note:

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Authorised Signature

Assistant Executive Engineer
Vidyaranyapura Sub Division
B.B.M.P, Bangalore - 97

28-11-22

Test Report
Water absorption test

Project Name	Package No.06 Consists of 14 Works
Client	Excecutive Engineer - Byatarayanapura Division
Job No	MCTPL/BBMP/EE/BTP/PMC/P-3877/2022-23/QR
Mix Type	Plain Cement Concrete (1:3:6)
Contractor	M/s SMLP Asphalts
Test Method	IS : 2386 (Part - 3) 1963 & Specification for Road & Bridge Works, MORT&H, Rev. V.
Location	Source of Material
Material	Coarse aggregates
Sample No	1
Sample Collection Date	26/Nov/2022
Testing Date	28-Nov-2022

Sl. No.	Particulars	Computations	Test Numbers		Mean
			Test 1	Test 2	
1	Weight of SSD sample	W_1 g	763	763	
2	Wt of Basket Filled with Aggregates Immersed in water	W_2g	2076	2096	
3	Weight of Saturated Aggregate in water	W_sg = W_2- W_1	1313	1333	
4	Weight of saturated surface dry aggregate in Air	W_3 g	2111	2121	
5	Weight of water equal to the Volume of the Aggregate	W_3- W_s	798	788	
6	Weight of Oven dried Aggregate	W_4g	2072	2087	
7	Specific Gravity	W_4/(W_3- W_s)	2.60	2.65	2.62
8	Apparent Specific Gravity	W_4/(W_4- W_s)	2.73	2.77	2.75
9	Water Absorption	(W_4- W_3)*100/ W_4	1.88	1.63	1.76

Comments: Maximum allowable Aggregate Water Absorption value is 2.0%.

Note:

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Mecadez Core Technologies Private Limited

Authorised Signature

Assistant Executive Engineer
Vidyaranyapura Sub Division
B.B.M.P, Bangalore - 97

CL3 AB-09

Test Report
Impact test

Project Name	Package No.06 Consists of 14 Works
Client	Excecutive Engineer - Byatarayanapura Division
Job No	MCTPL/BBMP/EE/BTP/PMC/P-3877/2022-23/QR
Mix Type	Plain Cement Concrete (1:3:6)
Contractor	M/s SMLP Asphalts
Test Method	IS : 2386 (Part - 4) 1963 & Specification for Road & Bridge Works, MORT&H, Rev. V.
Location	Source of Material
Material	Coarse aggregates
Sample No	1
Sample Collection Date	26/Nov/2022
Testing Date	28-Nov-2022

Sl. No.	Determination	Unit	Trails	
1	Weight of empty cylinder, w1	gm	960	960
2	Weight of container filled with Aggregate, w2	gm	1319	1318
3	Weight of the Aggregate before compaction, (w2 - w1) = w3	gm	359	358
4	Weight of the sample passing through 2.36 mm IS sieves after Impact, w4	gm	90	92
5	Weight of the sample retained on 2.36 mm IS sieve after Impact, w5	gm	269	266
6	Aggregate Impact Value (w4 / w3)x100	%	25.07	25.70
7	Specified Limit	%	45.00	

Results: Average Aggregate Impact Value: **25.38** %

Note:

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Mecadez Core Technologies Private Limited

Authorised Signature

Assistant Executive Engineer
Vidyaranyapura Sub Division
B.B.M.P, Bangalore - 97

28-12-09

Mecadez Core Technologies Private Limited

Project Management Consultancy Services

Summary of Frequencies of Field Tests and Lab Tests Conducted

Name of the work: Package No.06 Consists of 14 Works

Job No: MCTPL/BBMP/EE/BTP/PMC/P-3877/2022-23/QR

Contractor M/s SMLP Asphalts

Sl. No	Particulars of the Tests	M20 Concrete For Drain Raft			
		Quantity Cum	Frequency of Tests	Tests Required	Tests Carried Out
IV	Concrete				
1	Compressive strength test	23.31	1 to 5cum=1 sample 6 to 15 cum=2 sample 16 to 30cum=3 smaple 31 to 50cum= 4 sample 51cum and above= one additonal sample for every additional 50 cum or part therof	3	3
	7-days				
	28-days				

Note: Frequency of tests as per Specifications MORT&H, V Revision, Section 900.

consultant

contractor

ASSISTANT ENGINEER

ASSISTANT EXE ENGINEER

Assistant Executive Engineer
Vidyaranyapura Sub Division
B.B.M.P, Bangalore - 97